SAUCEDA WASH
FCD GAGE ID# 6923

STATION DESCRIPTION

LOCATION – The gage site is along State Route 85 approximately 5.5 miles south of Gila Bend. The gage equipment is located on the right bank upstream side of the bridge over Sauceda Wash. Latitude N 32° 52' 16.0", Longitude W 112° 45' 33.9". Located in the SE1/4 SW1/4 S27 T6S R5W in the Black Gap 7.5-minute quadrangle.

ESTABLISHMENT – The District established gaging on February 28, 1990. The USGS had gaged at this location for many years previous.

DRAINAGE AREA – 126 mi^2

GAGE – The recording gage is a pressure transducer type instrument. The PT is located inside the stilling well on the right bank upstream side of the bridge. The PT is at elevation 1.14 feet gage height, levels of August 15, 2001.

There are two staff gages at this location. One is located on the outside of the stilling well and one is located on the inside of the stilling well. Both read in gage height.

There is one crest gage at this location. It is maintained by the USGS. The pin elevation is at 2.60 feet gage height, levels of March 13, 2002.

ZERO GAGE HEIGHT - Zero gage height is equivalent to 842.01 feet NAVD 1988.

HISTORY – The USGS collected annual maximums at this site from November 27, 1963 through WY1979 after which the station was discontinued. During Water Year 1990, the station was reestablished cooperatively between the District and the USGS. The District added ALERT equipment on February 28, 1990. The USGS began continuous collection on March 15, 1990. PT elevation was adjusted in the database to match USGS gage datum. The position of the PT did not change, but the elevation was redefined from 0.00 feet to 0.90 feet gage height. The change was effective on May 1, 1992. The USGS discontinued continuous collection on June 7, 1994. Since then, the USGS has continued to collect peak data. Installed permanent reference mark at wash on June 7, 2001. Found PT at 1.14 feet gage height on August 15, 2001. Set in database back to August 1, 2001. Rating updated for WY2010, based on rating review of July 27, 2010.

REFERENCE MARKS –

RM-SAUCEDA is an FCD brass cap located about 10 feet north and about 30 feet east of the station house, inside the fence. Elevation 6.15 feet gage height, levels of March 13,

2002, or 848.156 feet NAVD 1988, levels of June 7, 2001. Northing 685055.376 feet; Easting 442918.55 feet. RM is destroyed.

RM1 is an ADOT brass cap on the upstream side of the SR85 bridge near the road surface. Elevation 8.31 feet gage height or 848.31 feet M.S.L., USGS levels of November 3, 1993.

RP1 is the tip of lower brace on crest gage, downstream side. Elevation 3.28 feet gage height, USGS levels of March 14, 1990.

XSGLB is the left bank cross section marker at the gage cross section on the upstream side of the SR 85 bridge. The marker is rebar painted orange. Elevation 7.52 feet gage height or 849.38 feet NAVD 1988, levels of March 20, 2002.

XSGRB is the right bank cross section marker at the gage cross section on the upstream side of the SR 85 bridge. The marker is rebar painted orange. Elevation 7.89 feet gage height or 850.03 feet NAVD 1988, levels of March 20, 2002.

CHANNEL AND CONTROL – The channel is predominantly a sand channel up and downstream of the gage location. On March 13, 2002, the channel was found to have been recently graded between the railroad bridge and the State Route 85 bridge. The channel is straight up and downstream of the gage and bridge. The SR85 bridge contains 7 concrete box culverts 5 foot by 10 foot skewed at a 28 degree angle to the flow and extending about 50 feet. The average elevation of the culvert inlet invert is 1.05 feet gage height, (USGS levels of November 3, 1993) and the outlet invert is 0.88 feet gage height. Note: A small grade control structure wall exists in the channel about 20 feet upstream of the crest gage. Also, debris accumulation on the bridge piers can be substantial. Also, the railroad trestle about 300 feet upstream may have an effect on discharge near the gage. Observations on September 8, 1997 showed relatively sharp local differences in high water marks upstream and downstream of the grade control structure.

RATING – The current rating is FCD rating #2. It is applied as of October 1, 2009. The rating was developed from several discharge measurements and use of previous rating.

DISCHARGE MEASUREMENTS – Wading measurements can be made in the channel upstream of the small grade control structure. High flow measurements can be taken from the bridge. Indirect estimates should carefully examine the high water mark profiles upstream and downstream of the bridge before selecting a reach. A short reach upstream of the railroad bridge was used for an indirect measurement for the January 21, 2010 event.

POINT OF ZERO FLOW – 0.9 feet gage height, levels of March 29, 2010.

FLOODS – A flood of 3,150 cfs at 6.3 feet gage height occurred September 26, 1976. A flood of 2,160 cfs at 4.26 feet gage height occurred on August 12, 1964.

REGULATION – None known

DIVERSIONS – Possible natural losses over interfluves to adjacent drainages.

ACCURACY – Fair

JUSTIFICATION – Long term watershed runoff record for watershed in southwest Maricopa County.

UPDATE – July 20, 2011
D E Gardner